



FirstEnergy Nuclear Operating Company

Perry Nuclear Power Plant
10 Center Road
Perry, Ohio 44081

John K. Wood
Vice President, Nuclear

440-280-5224
Fax: 440-280-8029

December 10, 2001
PY-CEI/OEPA-0366L

Ohio Environmental Protection Agency
Northeast District Office
Attention: Ms. Marie Underwood
2110 E. Aurora Rd.
Twinsburg, OH 44087-1969

Dear Ms. Underwood,

The Perry Nuclear Power Plant (PNPP) is considering the use of Sodium Bisulfite for removal of chlorine in the plant cooling water systems. PNPP currently uses Sodium Sulfite for chlorine removal. On 11/29/01, Mr. Leo Harte, representing PNPP contacted Ms. Marie Underwood of the Ohio Environmental Protection Agency (OEPA) to discuss this issue. As requested by Ms. Underwood, this letter is to notify the OEPA of our intent to evaluate the use of Sodium Bisulfite. If we determine Sodium Bisulfite will not work efficiently with our dechlorination system, we will revert to Sodium Sulfite. The MSDS for Sodium Bisulfite is attached. If you have any questions or require additional information, please contact Mr. Leo Harte at (440)-280-5514.

Very Truly Yours,

Attachment

cc: NRC Region III
NRC Resident Inspector
NRC Project Manager
NRC Document Control Desk (Docket No. 50-440)

Cool



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 7408

EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : NALCO 7408

APPLICATION : CHLORINE SCAVENGER

COMPANY IDENTIFICATION : ONDEO Nalco Company
ONDEO Nalco Center
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH : 1/2 FLAMMABILITY : 0/0 REACTIVITY : 0/0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

	Hazardous Substance(s)	CAS NO	% (w/w)
Sodium Bisulfite		7631-90-5	30.0 - 60.0

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING

Contains Sulfite. Irritating to respiratory system. May cause skin and eye irritation. Causes asthmatic signs and symptoms in hyper-reactive individuals.

Avoid breathing vapor. Use with adequate ventilation. Do not take internally. Keep container tightly closed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Protect product from freezing.

Wear suitable protective clothing, gloves and eye/face protection.

May evolve oxides of sulfur (SOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :

Skin, Eye, Inhalation

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

Can cause mild irritation.



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SKIN CONTACT :

Can cause mild irritation.

INGESTION :

Not a likely route of exposure. May cause asthmatic-like attack.

INHALATION :

Irritant to respiratory system. Causes asthmatic signs and symptoms in hyper-reactive individuals.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

HUMAN HEALTH HAZARDS - CHRONIC :

Ingestion of sulfite can cause a severe allergic reaction in asthmatics and some sulfite sensitive individuals. The resulting symptoms can include difficulty in breathing, flushed skin and a rash. Chronic exposure to sulfites may cause symptoms of upper respiratory disease and affect sense of taste and smell.

4. FIRST AID MEASURES

EYE CONTACT :

Immediately flush eye with water for at least 15 minutes while holding eyelids open. If irritation persists, repeat flushing. Get immediate medical attention.

SKIN CONTACT :

Immediately flush with plenty of water for at least 15 minutes. If symptoms persist, call a physician.

INGESTION :

Induce vomiting if the patient is fully conscious. If conscious, washout mouth and give water to drink. Get medical attention.

INHALATION :

Remove to fresh air, treat symptomatically. If breathing is difficult, administer oxygen. Get medical attention.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT :

None



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EXTINGUISHING MEDIA :

This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Keep containers cool by spraying with water. Use extinguishing media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARD :

May evolve oxides of sulfur (SO_x) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ensure adequate ventilation. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Wash site of spillage thoroughly with water. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

Do not contaminate surface water.

7. HANDLING AND STORAGE

HANDLING :

Avoid eye and skin contact. Do not take internally. Do not get in eyes, on skin, on clothing. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Keep the containers closed when not in use. Use with adequate ventilation.

STORAGE CONDITIONS :

Store the containers tightly closed. Store in suitable labelled containers. Amine and sulfite products should not be stored within close proximity or resulting vapors may form visible airborne particles.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below. Exposure limits are listed for sulfur dioxide (SO₂) since this product evolves SO₂ when open to the atmosphere.



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ACGIH/TLV :

Substance(s)

Sodium Bisulfite TWA: 5 mg/m3

Sulfur Dioxide TWA: 2 ppm , 5.2 mg/m3
STEL: 5 ppm , 13 mg/m3

OSHA/PEL :

Substance(s)

Sodium Bisulfite TWA: 5 mg/m3

Sulfur Dioxide TWA: 2 ppm , 5 mg/m3
STEL: 5 ppm , 13 mg/m3

ENGINEERING MEASURES :

General ventilation is recommended. Local exhaust ventilation may be necessary when dusts or mists are generated.

RESPIRATORY PROTECTION :

If significant mists, vapors or aerosols are generated an approved respirator is recommended. An approved respirator must be worn if the occupational exposure limit is likely to be exceeded.

HAND PROTECTION :

Neoprene gloves, Nitrile gloves, Butyl gloves, PVC gloves

SKIN PROTECTION :

Wear standard protective clothing.

EYE PROTECTION :

Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Keep an eye wash fountain available. Keep a safety shower available.

HUMAN EXPOSURE CHARACTERIZATION :

Based on our recommended product application and personal protective equipment, the potential human exposure is: Low

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Yellow
ODOR	Sulfurous, Pungent

**MATERIAL SAFETY DATA SHEET****PRODUCT****NALCO 7408****EMERGENCY TELEPHONE NUMBER****(800) 424-9300 (24 Hours) CHEMTREC**

SPECIFIC GRAVITY	1.37 @ 77 °F / 25 °C
DENSITY	11.4 lb/gal
SOLUBILITY IN WATER	Complete
pH (1 %)	4.1
VISCOSITY	2.8 cps @ 77 °F / 25 °C
FREEZING POINT	34 °F / 1.1 °C
BOILING POINT	219 °F / 104 °C
VAPOR PRESSURE	32 mm Hg, 76 mm Hg @ 77 °F, 99.9 °F / 25 °C, 37.7 °C
VAPOR DENSITY	2.2 (Air = 1)
VOC CONTENT	0.00 %

10. STABILITY AND REACTIVITY**STABILITY :**

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Freezing temperatures.

MATERIALS TO AVOID :

Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors. SO₂ may react with vapors from neutralizing amines and may produce a visible cloud of amine salt particles.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of sulfur

11. TOXICOLOGICAL INFORMATION

The following results are for a similar product.

ACUTE ORAL TOXICITY :

Species	LD50	Tested Substance
Rat	4.1 g/kg	Similar Product
Rating : Non-Hazardous		

ACUTE DERMAL TOXICITY :

Species	LD50	Tested Substance
Rabbit	3 g/kg	Similar Product
Rating : Non-Hazardous		

PRIMARY SKIN IRRITATION :

Draize Score	Tested Substance
1.0 / 8.0	Similar Product

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Rating : Slightly irritating

PRIMARY EYE IRRITATION :

Draize Score

9.4 / 110.0

Rating : Minimally irritating

Tested Substance

Similar Product

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION :

Based on our hazard characterization, the potential human hazard is: Low

12. ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL EFFECTS :**

The following results are for the product and a similar product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Tested Substance
Rainbow Trout	96 hrs	> 100 mg/l	Product
Fathead Minnow	96 hrs	382 mg/l	Similar Product

Rating : Essentially non-toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Tested Substance
Daphnia magna	48 hrs	728 mg/l		Similar Product

Rating : Essentially non-toxic

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

Based on our hazard characterization, the potential environmental hazard is: Low

Based on our recommended product application and the product's characteristics, the potential environmental exposure is: High

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a properly licensed hazardous waste treatment, storage, disposal or recycling facility. Consult local, state, and federal regulations for specific requirements.

**MATERIAL SAFETY DATA SHEET****PRODUCT****NALCO 7408****EMERGENCY TELEPHONE NUMBER****(800) 424-9300 (24 Hours) CHEMTREC****14. TRANSPORT INFORMATION**

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are:

LAND TRANSPORT :

Proper Shipping Name :	BISULFITES, AQUEOUS SOLUTION, N.O.S.
Technical Name(s) :	SODIUM BISULFITE
UN/ID No :	UN 2693
Hazard Class - Primary :	8
Packing Group :	III
Flash Point :	None
DOT Reportable Quantity (per package) :	12,000 lbs
DOT RQ Component :	SODIUM BISULFITE

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name :	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
Technical Name(s) :	SODIUM BISULFITE
UN/ID No :	UN 2693
Hazard Class - Primary :	8
Packing Group :	III
IATA Cargo Packing Instructions :	820
IATA Cargo Aircraft Limit :	60 L (Max net quantity per package)

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name :	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
Technical Name(s) :	SODIUM BISULFITE
UN/ID No :	UN 2693
Hazard Class - Primary :	8
Packing Group :	III

15. REGULATORY INFORMATION**NATIONAL REGULATIONS, USA :**

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Sodium Bisulfite : Respiratory irritant



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CERCLA/SUPERFUND, 40 CFR 117, 302 :

This product contains the following Reportable Quantity (RQ) Substance. Also listed is the RQ for the product.

RQ Substance
Sodium Bisulfite

RQ
12,000 lbs

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

- | | |
|---|-----------------------------------|
| X | Immediate (Acute) Health Hazard |
| - | Delayed (Chronic) Health Hazard |
| - | Fire Hazard |
| - | Sudden Release of Pressure Hazard |
| - | Reactive Hazard |

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

The chemical substances in this product are on the TSCA 8(b) Inventory (40 CFR 710) or are sold commercially under the polymer exemption (40 CFR 723.250).

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act :

When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 173.310 Boiler Water Additives, 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods and 21 CFR 176.180 Components of paper and paperboard in contact with dry foods.

This product has been certified as KOSHER/PAREVE for year-round use INCLUDING THE PASSOVER SEASON by the CHICAGO RABBINICAL COUNCIL.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR / formerly Sec. 311 :

This product contains the following substances listed in the regulation:

Substance(s)
Sodium Bisulfite :

Citations
Sec. 311



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CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :

This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :

None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :

The following substances are disclosed for compliance with State Right to Know Laws:

Sodium Bisulfite

7631-90-5

Water

7732-18-5

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

E - Corrosive Material

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

All substances in this product are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

* The human risk is: Low

* The environmental risk is: Low

Any use inconsistent with our recommendations may affect the risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.



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REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, Co.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO

Prepared By : Product Safety Department

Date issued : 05/16/2000

Replaces : 06/18/1999